

**REMARKS**

Claims 1, 2, 4-10 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Shafer in view of Takahashi.

Claims 11, 13, 14 and 16-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Shafer in view of Braat.

On page 7 of the outstanding Office Action, the Examiner states that while the Applicant argued that the Takahashi reference fails to teach the virtual intermediate image formed by the entire first optical group, the language of claims 1 et al. does not state the virtual intermediate image is formed by the “entire” first optical group.

In view of the Examiner’s comments, Applicant has amended claim 1 to recite that the virtual image is formed by the entire first optical group physically and optically behind the sixth mirror. Applicant respectfully has clarified claim 1 to better illustrate to the Examiner the difference between the present invention and the Takahashi invention. More specifically, Applicant has amended claim 1 to make it clear that the claimed virtual intermediate image is an effect of the full six mirror catadioptric group (the first optical group) as opposed to being the effect of an artificially identified subgroup as the Examiner has done in constructing the argument in the Office Action against Applicant’s claim 1.

In other words, Applicant respectfully submits that the Takahashi reference does not disclose a system where the virtual image is formed by the entire first optical group that is itself defined as including an even number of at least six mirrors. In contrast to the arrangement recited in amended claim 1, the Examiner contends that the cited reference produces a virtual image; however, the production of this virtual image is not the effect of the entire first optical group as in amended claim 1; but rather, is the result of a subgroup of mirrors.

The secondary cited reference fails to disclose or even suggest the above feature and therefore, does not cure the deficiencies of the primary prior art reference.

For at least this reason, Applicant respectfully requests reconsideration and allowance of claim 1, in its amended form.

Claims 2, 4-6, 9, 10 and 12 should be allowed as depending from what should be an allowed independent claim 1, as amended.

Claim 7 has been amended in a similar manner as claim 1 and therefore, the above discussion applies equally to claim 7.

Claim 8 should be allowed as depending from what should be an allowed independent claim 7.

Claim 11 has been amended in a manner similar to claim 1 to recite that a virtual image is formed optically behind the entire first optical group. For the same reasons stated above with respect to why claim 1 is patentable over the prior art references, Applicant respectfully contends that claim 11 in its amended form should be allowed over the cited prior art references.

Claims 14 and 16-30 should be allowed as depending from what should be an allowed independent claim 11, as amended.

In rejecting claim 13, the Examiner contends that Braat teaches an arrangement where the third and fourth mirrors are located physically between the first and second mirrors. Applicant respectfully disagrees with this conclusion for the following reasons.

Claim 13 recites that a third mirror and a fourth mirror are disposed optically after a first mirror and a second mirror, as well as being physically disposed between the first mirror and the second mirror. Braat discloses a system having a first mirror (identified in the figures as mirror 5), a second mirror (identified in the figures as mirror 6), a third mirror (identified in the figures as

mirror 7), a fourth mirror (identified in the figures as mirror 8), a fifth mirror (identified in the figures as mirror 9), a sixth mirror (identified in the figures as mirror 10). Thus, it is clear from the Braat specification and figures that the third and fourth mirrors are the mirrors 7 and 8. While the Examiner refers to Figure 2 as showing the claimed arrangement of mirrors, this is not the case since it is clear that only one mirror, namely the third mirror 7, is physically disposed between the first mirror 5 and the second mirror 6. In contrast to what the Examiner contends, the fourth mirror identified as mirror 8 is clearly not physically disposed between the first and second mirrors. Instead, the fourth mirror 8 is physically disposed between the second mirror 6 and the reflective mask 15.

Since this limitation is clearly lacking in the Braat reference, a combination of the Shafer and Braat references fails to disclose or suggest the present invention embodied in claim 13.

Based on the foregoing, Applicant respectfully requests reconsideration and allowance of the claims since a combination of the cited references fails to yield the claimed invention.

In view of the above amendment, applicant believes the pending application is in condition for allowance.

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Respectfully submitted,

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